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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,273	11/17/2000	Govind Malalur	108339-09059	5515

32294 7590 05/28/2004

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8000 TOWERS CRESCENT  
TYSONS CORNER, VA 22182

EXAMINER
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AL HASHEMI, SANA A

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 05/28/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/714,273

**Applicant(s)**

MALALUR, GOVIND

**Examiner**

Sana Al-Hashemi

**Art Unit**

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

**Claims Status: 1-15 pending.**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/5/2003 has been entered.

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3-9, and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Spinney (US Patent No. 5,414,704)

1. Regarding Claims 1, 8, and 15, Spinney discloses a method of performing a table look-up in a network device comprising the steps of:

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receiving a data packet through an input port of the network device (see column 6, lines 14-17, Spinney);

parsing said data packet into an index portion (see column 6, lines 17-21, Spinney), and a corresponding bucket portion (see column 6, lines 50-58, Spinney);

indexing said index portion to said corresponding bucket portion (see Fig. 6, Spinney);

and

accessing address table information stored in an address look-up table (see column 7, lines 58-66, Spinney), using said bucket portion (see column 7, lines 10-17, Spinney).

2. Regarding Claims 2, and 9, Spinney discloses a method wherein said step of indexing said index portion to said bucket portion is the step of linearly indexing said index portion to said bucket portion (see Fig. 6, 90, 92, 93, Spinney).

3. Regarding Claims 4, and 11, Spinney discloses a method further comprising the step of sorting said bucket portion (see Fig. 5, Spinney).

4. Regarding Claims 5, and 12, Spinney discloses a method further comprising the step of binary sorting said bucket portion (see column 9, lines 17-22, Spinney).

5. Regarding Claims 6, and 13, Spinney discloses a method wherein the step of parsing said data packet into an index portion and a corresponding bucket portion further comprises the step of parsing said index portion so that said index portion will recur when other data is parsed into said index portion and said corresponding bucket portion (see column 7, lines 10-31, Spinney).

6. Regarding Claims 7, and 14, Spinney discloses a method further comprising the step of storing information regarding said data in said address look-up table as table information when

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no table information is available using said bucket portion to access table information (see column 8, lines 46-50, Spinney).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney (US Patent No. 5,414,704) in view of Warren (US Patent No. 6,690,667).

7. Regarding Claims 3, and 10, Spinney discloses all the limitations subject matter as stated above except the method wherein said step of indexing said index portion to said bucket portion is the step of XOR indexing said index portion to said bucket portion. However, Warren on the other hand teaches the method of using the XOR in a lookup hash table (see column 5, lines 53-65, Warren). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the XOR method in organizing the bits in a hash table with the motivation of providing an operation logical for combining two bits if one or both values are true, which reduce the amount of time and process to complete a table of only on bits is checked every time in hash table.

***Other Prior Art Made of Record***

1. Burrows (US Patent No. 5,745,889) discloses a method and parsing information of database records using word location pairs and meta word location pairs.
2. Burrows (US Patent No. 5724033) discloses a method for encoding delta values.
3. Warren (US Patent No. 6,690,667) discloses a switch with adaptive address lookup hashing scheme.
4. Spinney (US Patent No. 5,414,704) discloses an address lookup in packet data communications link using hashing and content addressable memory.
5. Bauman (US Patent No. 6,046,979) discloses a method and apparatus for controlling the flow of variables length packets through a multi-port switch.


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*Points of Contact*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to: Sana Al-Hashemi whose telephone number is (703) 305-4881. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436. Any response to this office action should be mailed to: The Commissioner of Patents and Trademarks, Washington, D.C. 20231. Or telefax at phone number (703) 872-9306. For formal or draft communications, please label "PROPOSED" or "DRAFT". Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, 6<sup>th</sup> Floor Receptionist, Arlington, Virginia. 22202.

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Sana Al-Hashemi  
Patent Examiner  
Technology Center 2100  
May 21, 2004

  
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